

535


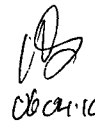
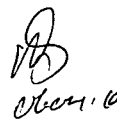

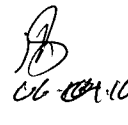
DART AEROSPACE LTD	Work Order: 23976
Description: Tube Assembly	Part Number: D3304-043
Dwg: D3304 Rev. A+B 4/11/08.12 KJ	Qty: 2
Page 1 of 1	

Step	Location	Procedure	By	Date	Qty
1	DC	Issue Traveler	AP	05/08/12	2
2	MC	Cut blank: 22.00" as per Dwg D3304 Material: AISI 304/316 SS tubing 0.875" x 0.065" wall (M304TR0.875W.065) Identify for D3304-3 u 0405.13 Batch: M16254	AP	05/08/30	2
3	MC	Turn as per Folio FA458 and Dwg D3304 Identify as D3304-3	AP	05/08/30	2
4	QC2	Inspect parts as they come off the CNC machine	AP	05/08/30	2
5	QC8	Second check	AP	05/08/30	2
6	MC	Deburr	AP	05/08/30	2
7	GA	Form as per Dwg D3304 Ensure that bend radius does not fall into straight section using DT8756.	AP	06/04/10	2
8	GA	Drill as per Dwg D3304 using drill Jig D3304-T1	AP	06/04/10	0
9	GA	Cut tube to length as per Dwg D3304	AP	06/04/10	0
10A	GA	Deburr			
10B	QC5	INSPECT WORK TO STEP 10A			
11	WS	Weld bracket as per Dwg D3304 and QSI 004 using DT8755 Pick: Qty Part Number Description Batch 1 D3304-57 Bracket			
12	QC9	Inspect weld			
13	FP	Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3			
14	QC3	Inspect Powder Coat			
15	GA	Assemble lanyard and pip pin as per Dwg D3304 Pick: Qty Part Number Description Batch 1 BLBS-0016 Pip Pin 2 CBL-460 Loop Sleeve 12.5" CBL-1240 Cable			
16	QC5	Inspect work to Step 15			
17	ST	Identify parts with batch number and part number using a fine point permanent marker as per Dwg D3304 and Stock			
18	AC	Cost / part:	U	06/04/11	
19	DC	Close W/O Inspect Level 21			

Rev	Date	Change	Revised By	Approved
A	04.09.08	New issue	KJ/JLM	
B	04.09.28	BLBS-0016 changed from BLRS-001	KJ/JLM	
C	04.11.17	Revised Step 15	KJ/JLM	
D	04.11.26	Revised Steps 7	KJ/JLM	

RELEASED

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			
	8	holes 2m/100 cut 0.8 tolerance <u>Bad here</u>		0.8 0.05 0.05	 06/04/10	 06/04/10	 06/04/10	 06/04/10

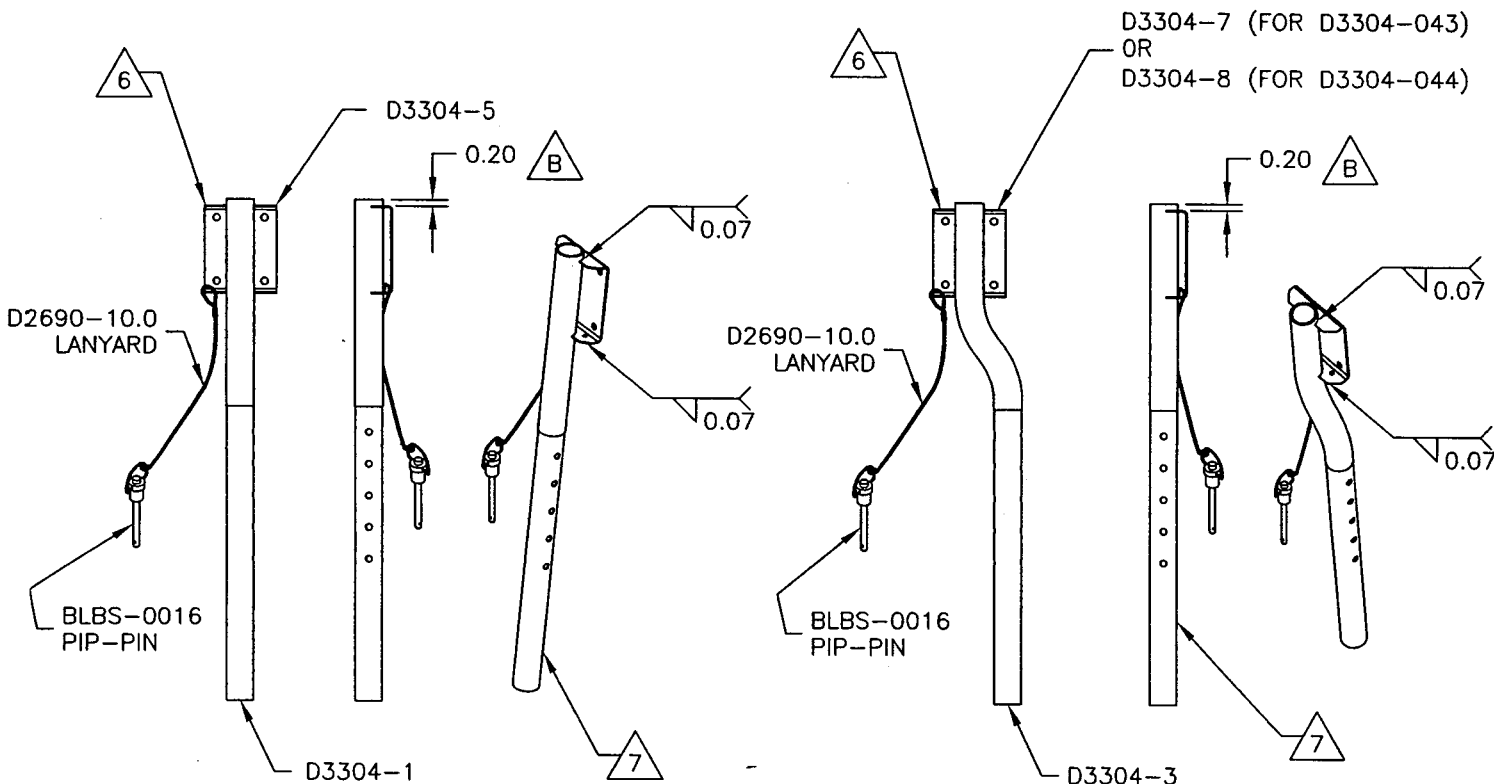
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

NOTE: Date & initial all entries

QA: N/C Closed: _____ Date: _____



DESIGN		DRAWN BY		DART AEROSPACE LTD	
RF		RF		HAMKESBURY, ONTARIO, CANADA	
CHECKED		APPROVED		DRAWING NO.	REV. B
				D3304	SHEET 1 OF 4
DATE				TITLE	SCALE
05.07.15				TUBE ASSEMBLY	1:6
A		04.08.18		NEW ISSUE	
B		05.07.15		UPDATE DIMENSIONS; ADD D3304-7/-8	



D3304-041 TUBE ASSEMBLY

D3304-044 TUBE ASSEMBLY (SHOWN) D3304-043 OPPOSITE

D3304-041/-043/-044 NOTES:

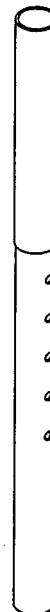
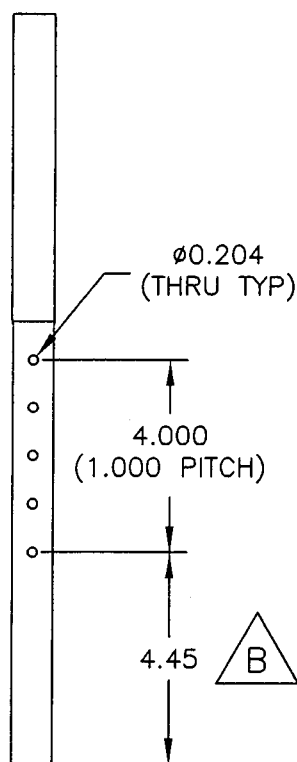
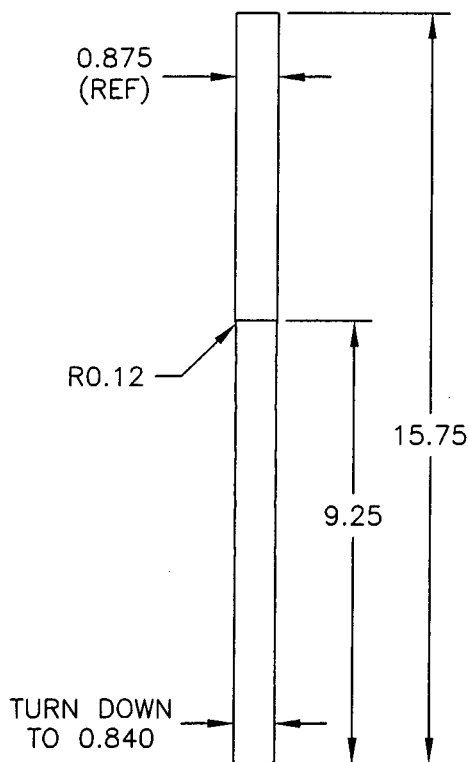
- 1) FINISH: POWDER COAT GREY SANDTEX (REF. 4.3.5.6) PER DART QSI 005 4.3
- 2) WELD PER DART QSI 004
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 6) IDENTIFY AS INDICATED USING FINE POINT PERMANENT INK MARKER "TCCA-PDA, DART AEROSPACE LTD, P/N D3304-XXX B/N BXXXXX, FOR PRODUCT ELIGIBILITY SEE PDA04-11"
- 7) IF BEING ASSEMBLED WITH D3303-041, ADD THE FOLLOWING USING A FINE POINT PERMANENT INK MARKER: "TCCA-PDA, DART AEROSPACE LTD, P/N D412-724-XXX B/N BXXXXX, FOR PRODUCT ELIGIBILITY SEE PDA04-11"

RELEASED
05.08.11



DESIGN RF	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3304	REV. B SHEET 2 OF 4
DATE 05.07.15		TITLE TUBE ASSEMBLY	SCALE 1:4

RELEASED
05.08.11 *[Signature]*



SHOP COPY
RETURN TO
ENGINEERING

UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE

WORK ORDER
NO. 23976

D3304-1 TUBE

D3304-1 NOTES:

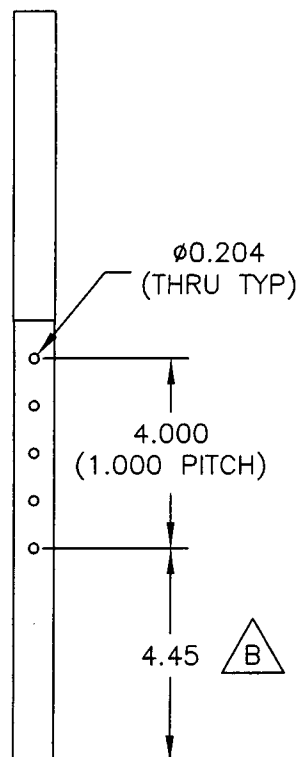
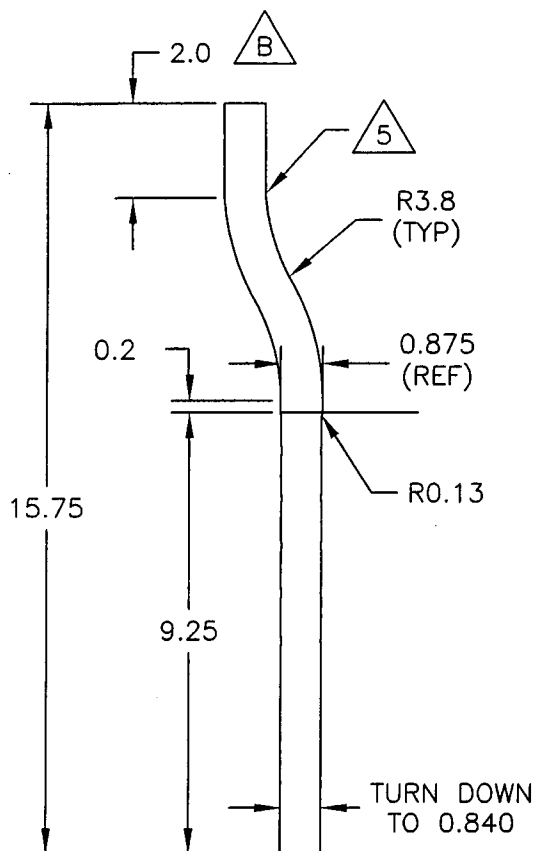
- 1) MATERIAL: AISI 304/316 STAINLESS STEEL TUBE $\phi 0.875 \times 0.065$ WALL
(REF. DART SPEC M304TR0.875W.065) ENSURE SEAMLESS TUBE IS USED
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015

Copyright © 2004 by DART AEROSPACE LTD

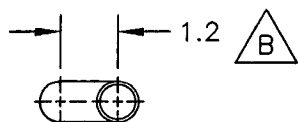
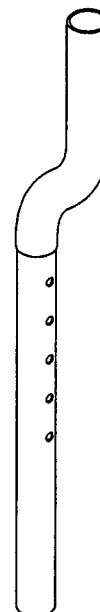
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



DESIGN RF	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3304	REV. B SHEET 3 OF 4
DATE 05.07.15		TITLE TUBE ASSEMBLY	SCALE 1:4



RELEASED
05-08-11



SHOP COPY

RETURN TO
ENGINEERING

CONTROLLED COPY

NO AMENDMENT
WITHOUT NOTICE

WORK ORDER

NO. 23976

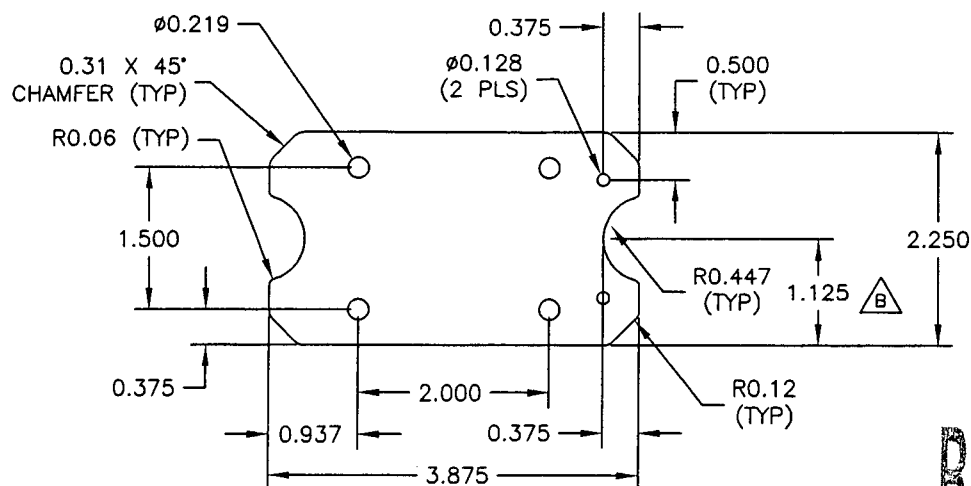
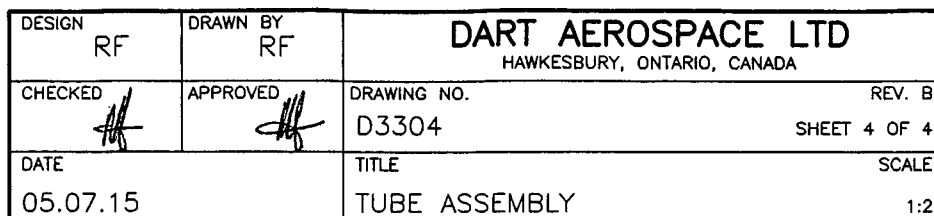
D3304-3 TUBE

D3304-3 NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL TUBE $\phi 0.875 \times 0.065$ WALL
(REF. DART SPEC M304TR0.875W.065) ENSURE SEAMLESS TUBE IS USED
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) BEND LINES 9.625, 13.375 DIMENSIONS

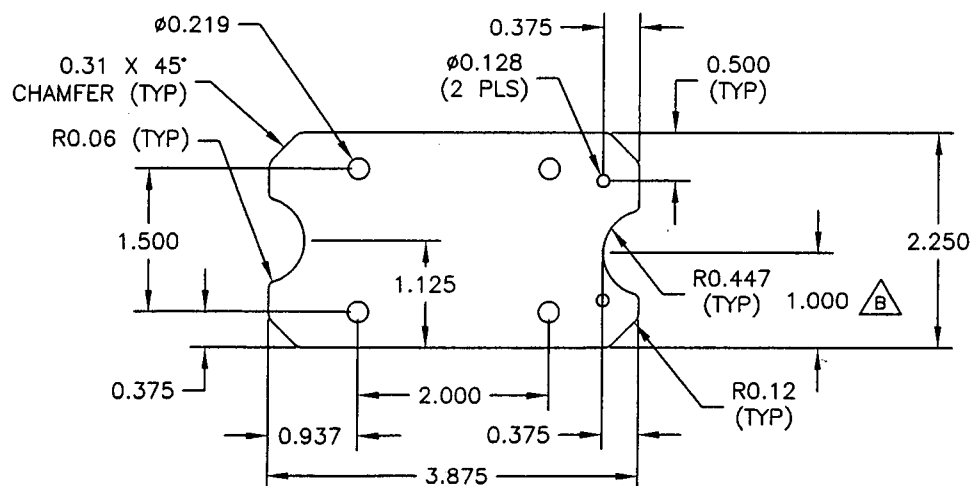
Copyright © 2004 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

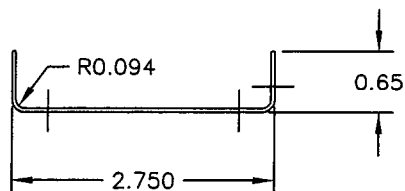


D3304-5 FLAT PATTERN

RELEASED
05-08-11 #



D3304-7/-8 FLAT PATTERN



D3304-5/-7 BRACKET
D3304-8 OPPOSITE

SHOP COPY
RETURN TO
ENGINEERING
COPY
AMENDMENT
NOTICE

NOTES:

- 1) MATERIAL: AISI 304/316 SS 0.040 THICK SHEET (REF. DART SPEC M304S20GA)
2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
3) ALL DIMENSIONS ARE IN INCHES
4) BREAK ALL SHARP EDGES 0.005 TO 0.015

WORK ORDER
NO. 23976

Copyright © 2004 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

Job Costing Report

Dart Aerospace Ltd.
Hawkesbury

Aug 08, 2005
10:50 am

Work Order No : 0023976
Project Name : D3304-043
Project For : WK535
Work Order Type : Main
Main WO Number :
House Part Number : D3304-043
Description : Tube Assembly
Manufactured : Yes
Amount Req'd : 2
Amount Done : 0
Start Date : 08-08-05
Est Finish Date : 08-31-05
Act Finish Date :
Drawings Req'd : No
Ok for Approval :
Approval Rec'd :

Department Code:
Burden Flags : NNNNNNNN
WO Status : Open
Invoice State : Not Invoiced
Invoice Date :
Invoice Number :
Invoice Amount : 0.00
Order Entry No :
OE Value : 0.00
Est Mark Up : 0.000%
Actual Mark Up : 0.000%
\$0 Posted to Finished Goods

	Estimated	Actual	Var. %	Posted	To Post
Material Cost :	0.00	0.00	0.00	0.00	0.00
Engineering Hours :	0.00	0.00	0.00		
Engineering Cost :	0.00	0.00	0.00	0.00	0.00
Production Hours :	0.00	0.00	0.00		
Production Cost :	0.00	0.00	0.00	0.00	0.00
Packaging Hours :	0.00	0.00	0.00		
Packaging Cost :	0.00	0.00	0.00	0.00	0.00
OverHead Hours :	0.00	0.00	0.00		
OverHead Cost :	0.00	0.00	0.00	0.00	0.00
CNC Hours :	0.00	0.00	0.00		
CNC :	0.00	0.00	0.00	0.00	0.00
Misc. Hours :	0.00	0.00	0.00		
Misc. :	0.00	0.00	0.00	0.00	0.00
Burden :	0.00	0.00	0.00		
Total Cost :	0.00	0.00	0.00		
Mark up :	0.000	0.000			
Selling Cost :	0.00	0.00			

	Estimated	Actual
Labour Hrs/Amount Done :	0.00	0.00
Profits/(Loss) :	0.00	0.00

Job Costing Report

Dart Aerospace Ltd.
Hawkesbury

Nov 08, 2005
10:47 am

Work Order No : 0023976
Project Name : D3304-043
Project For : WK535
Work Order Type : Main
Main WO Number :
House Part Number : D3304-043
Description : Tube Assembly
Manufactured : Yes
Amount Req'd : 2
Amount Done : 0
Start Date : 08-08-05
Est Finish Date : 08-31-05
Act Finish Date :
Drawings Req'd : No
Ok for Approval :
Approval Rec'd :

Department Code:
Burden Flags : NNNNNNNN
WO Status : Open
Invoice State : Not Invoiced
Invoice Date :
Invoice Number :
Invoice Amount : 0.00
Order Entry No :
OE Value : 0.00
Est Margin : 0.000%
Actual Margin : 0.000%
\$0 Posted to Finished Goods

	Estimated	Actual	Var. %	Posted	To Post
Material Cost :	0.00	0.00	0.00	0.00	0.00
Engineering Hours :	0.00	0.00	0.00		
Engineering Cost :	0.00	0.00	0.00	0.00	0.00
Production Hours :	0.00	1.00	100.00		
Production Cost :	0.00	20.27	100.00	0.00	20.27
Packaging Hours :	0.00	0.00	0.00		
Packaging Cost :	0.00	0.00	0.00	0.00	0.00
OverHead Hours :	0.00	0.00	0.00		
OverHead Cost :	0.00	0.00	0.00	0.00	0.00
CNC Hours :	0.00	1.00	100.00		
CNC :	0.00	0.00	0.00	0.00	0.00
Misc. Hours :	0.00	0.00	0.00		
Misc. :	0.00	0.00	0.00	0.00	0.00
Burden :	0.00	0.00	0.00		
Total Cost :	0.00	20.27	100.00		
Margin :	0.000	0.000			
Selling Cost :	0.00	20.27			

	Estimated	Actual
Labour Hrs/Amount Done :	0.00	0.00
Profits/(Loss) :	0.00	(-20.27)

MIS 2/13
u
11-13

Date: Monday, 14/11/2005 8:33:45 AM
 User: Alba Panzuto

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: TUBE ASSEMBLY
Job Number	: 23976		
Estimate Number	: 10429		
P.O. Number	:	Part Number	: D3304043
This Issue	: 14/11/2005	S.O. No.	:
Prsht Rev.	: NC	Drawing Number	: D3304 REV. B
First Issue	: / /	Project Number	:
Previous Run	: 23658	Drawing Revision	: B
	Type	Material	:
	: MACHINED PARTS	Due Date	: 15/12/2005
Written By	:	Qty:	2
Checked & Approved By	:	Um:	Each
Comment	: Est: D 04.11.26 Revised Step 7 KJ/JLM		

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
----------------	------------------------------	----------------------

1.0	M304TR0875W065	SS TUBING
-----	----------------	-----------

2.0	HARDINGE	HARDINGE CNC LATHE SMALL
-----	----------	--------------------------

**Comment:** HARDINGE CNC LATHE SMALL

1- Cut blank: 22.00" as per Dwg D3304

2- Turn as per Folio FA458 and Dwg D3304

3- Deburr

3.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
-----	-----	--

**Comment:** INSPECT PARTS AS THEY COME OFF MACHINE

4.0	QC8	SECOND CHECK
-----	-----	--------------

**Comment:** SECOND CHECK

5.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1
-----	-------------	-------------------------------

**Comment:** SMALL & MEDIUM FAB RESOURCE 1

1- Form as per Dwg D3304

Ensure that bend radius does not fall into straight section using DT8756.

2- Drill as per Dwg D3304 using drill Jig D3304-T1

3- Cut tube to length as per Dwg D3304

4- Deburr

6.0	QC5	INSPECT WORK TO CURRENT STEP
-----	-----	------------------------------

**Comment:** INSPECT WORK TO CURRENT STEP

Date: Monday, 14/11/2005 8:33:45 AM
User: Alba Panzuto

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: TUBE ASSEMBLY

Job Number: 23976

Part Number: D3304043

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

7.0	D33047	Bracket
-----	--------	---------

8.0	LARGE FAB 1	LARGE FABRICATION RESOURCE 1
-----	-------------	------------------------------



Comment: LARGE FABRICATION RESOURCE 1
Weld bracket as per Dwg D3304 and QSI 004 using DT8775

9.0	QC9	VISUAL WELDING INSPECTION
-----	-----	---------------------------



Comment: VISUAL WELDING INSPECTION

10.0	POWDER COATING	POWDER COATING
------	----------------	----------------



Comment: POWDER COATING
Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3

11.0	QC3	INSPECT POWDER COAT/CHEMICAL CONVERSION
------	-----	---



Comment: INSPECT POWDER COAT

12.0	BLBS0016	PIP PIN
------	----------	---------

13.0	CBL460	Loop Sleeve
------	--------	-------------

14.0	CBL1240	Cable
------	---------	-------

15.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1
------	-------------	-------------------------------



Comment: SMALL & MEDIUM FAB RESOURCE 1
Assemble lanyard and pip pin as per Dwg D3304
Identify as D3304-043

16.0	QC5	INSPECT WORK TO CURRENT STEP
------	-----	------------------------------



Comment: INSPECT WORK TO CURRENT STEP

17.0	PACKAGING 1	PACKAGING RESOURCE #1
------	-------------	-----------------------



Comment: PACKAGING RESOURCE #1
Identify with P/N and B/N as per Dwg using a permanent fine point marker, then Stock
Location: _____

Date: Monday, 14/11/2005 8:33:45 AM
User: Alba Panzuto

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: TUBE ASSEMBLY

Job Number: 23976

Part Number: D3304043

Job Number:



Seq. #:

Machine Or Operation:

Description :

18.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL
Inspection Level 21

Job Completion

